

## INDEX

- 60-mm subcaliber device, A-1 (illus)
  - assembly, A-4
  - care and cleaning, A-6
  - description, A-1, A-2 (illus)
  - disassembly, A-4
    - M49A2 HE, A-5 (illus)
    - M50A2, A-6
  - misfire procedures, A-6, A-7 (illus)
  - operation, A-9
  - range construction, A-7, A-8 (illus)
  - safety, A-6
- ammunition,
  - care and handling, 1-9, 3-22
    - fuzes, 1-9
    - projectiles/cartridges, 1-9
    - unused propelling charges, 1-9
  - field storage, 1-10, 1-11 (illus)
- aiming circles, M2 and M2A2, 2-5, 2-6 (illus), 2-7 (illus)
  - accessory equipment, 2-8
    - M24 tripod, 2-9
    - M51 instrument light, 2-9
  - care and maintenance, 2-18
  - characteristics, 2-5
  - declination, 2-11
  - description, 2-5
  - disassembly, 2-18
  - orienting, 2-14, 2-15, 2-16 (illus), 2-17, 2-18 (illus)
  - setup and leveling of, 2-9, 2-10 (illus)
  - use, 2-5
- aiming posts, M14 and M1A2, 2-36 (illus)
  - placing out, 2-45
    - alternate method, 2-46
    - arm-and-hand signals, 2-47 (illus), 2-48 (illus)
- aiming post lights, M58 and M59, 2-37 (illus)
- boresights, 2-27
  - calibration, 2-30, 2-32, 2-33
  - installation, 2-29
  - M45-series, 2-27, 2-28 (illus)
    - components, 2-27

- M115, 2-28, 2-29
  - components, 2-28
- compass, M2, 2-1, 2-3 (illus), 2-4 (illus)
  - characteristics, 2-1
  - description, 2-2
  - use, 2-2
- fire commands, 2-50
  - arm-and-hand signals, 2-52, 2-53 (illus)
  - repeating and correcting, 2-54
  - subsequent, 2-53
- gunner's examination, 9-1
  - eligible personnel, 9-2
  - examining board, 9-1
  - general rules, 9-3
  - ground-mounted mortar, 9-4 through 9-18
  - location and date, 9-2
  - preparatory instructions, 9-1
  - qualification, 9-3
  - scorecard, 9-2 (illus)
  - track-mounted mortar, 9-18 through 9-29
- indirect fire team, 1-2 (illus)
  - applications, 1-2
  - mission, 1-3
- instrument light, M53E1, 2-34 (illus)
  - installation, 2-35 (illus)
  - M166 carrying case, 2-35, 2-36 (illus)
- M303 subcaliber insert, A-37, A-38 (illus)
  - characteristics, A-38
  - maintenance, A-38
  - misfire procedures, A-40
- mortar, 4.2-inch, M30, 6-1
  - ammunition, 6-40
    - care and handling, 6-49
    - classification, 6-40, 6-41 (illus)
    - fuzes, 6-43
    - preparation, 6-44
  - components, 6-3 (illus)
    - baseplate assembly, 6-8 (illus)
    - bridge assembly, 6-6, 6-7 (illus)

- cannon, M30, 6-4, 6-5 (illus)
- mount, M24A1, 6-5, 6-6 (illus)
- rotator assembly, 6-7, 6-8 (illus)
- duties, 6-1, 6-2 (illus)
- operation, carrier-mounted, 6-25
  - carriers, M106, M106A1, and M106A2, 6-22
    - description, 6-22, 6-23 (illus)
  - dismounting, 6-34
  - maintenance, 6-27
  - mount, 6-25, 6-26 (illus)
  - safety checks, 6-36
- operation, ground-mounted, 6-9
  - deflection and elevation change, large, 6-15
  - deflection change, small, 6-15
  - dismounting, 6-22
  - loading and firing, 6-16
  - mounting, 6-9, 6-10 (illus), 6-11 (illus), 6-12 (illus), 6-13 (illus), 6-14 (illus)
  - safety checks, 6-14
- organization, 6-1
- mortar, 60-mm, M224, 3-1
  - ammunition, 3-17, 3-18 (illus)
    - care and handling, 3-22
    - classification, 3-17
    - color codes, 3-18
    - fuzes, 3-19
      - M734, 3-19, 3-20 (illus)
      - M935, 3-20 (illus)
  - preparation, 3-19
    - Standard B, 3-21 (illus)
- components, 3-1, 3-2 (illus)
  - baseplate, M7, 3-4, 3-5 (illus)
    - M8, 3-5 (illus)
  - bipod assembly, M170, 3-6 (illus)
  - cannon assembly, M225, 3-4 (illus)
- dismounting and carrying, 3-16
- duties, 3-1
- malfunctions, 3-12
  - cookoff, 3-12
  - hangfire, 3-12
  - misfire, 3-12
- operation, 3-7
  - deflection and elevation changes, small, 3-9
  - deflection and elevation changes, large, 3-9
  - mounting, 3-7
  - premount checks, 3-7

- safety check, 3-8
- organization, 3-1

mortar, 81-mm, M29A1, 5-1

- ammunition, 5-14
- function, 5-14
- components, 5-2 (illus)
  - cannon assembly, M29A1, 5-4 (illus)
  - baseplate, M3, 5-5, 5-6 (illus)
  - bipod assembly, M23A1, 5-4 (illus)
- duties, 5-1, 5-2 (illus)
- operation, 5-6
  - deflection and elevation changes, large, 5-10, 5-11 (illus)
  - deflection and elevation changes, small, 5-10
  - dismounting, 5-13
  - mounting, 5-7, 5-8 (illus), 5-9 (illus)
  - premount checks, 5-6, 5-7 (illus)
  - safety checks, 5-9
- organization, 5-1

mortar, 81-mm, M252, 4-1

- ammunition, 4-14
  - care and handling, 4-22, 4-23 (illus)
  - classification, 4-14
  - function, 4-16
  - fuzes, 4-18
    - mechanical time, M84, 4-19
      - M84A1, 4-19
      - M751, 4-20
      - M772A1, 4-19
    - point-detonating, M524-series, 4-8
    - point-detonating, M935, 4-18
    - proximity, M532, 4-19
- preparation, 4-21
- components, 4-2, 4-3 (illus)
  - baseplate, M3A1, 4-6 (illus)
  - cannon assembly, M253, 4-5 (illus)
  - mount, M177, 4-5 (illus)
- duties, 4-1, 4-2 (illus)
- operation, 4-7
  - deflection and elevation changes, large, 4-11
  - deflection and elevation changes, small, 4-10
  - dismounting, 4-13
  - mounting, 4-8
  - premount checks, 4-7, 4-8 (illus)
  - safety checks, 4-9

- organization, 4-1
- mortar, 120-mm, M120, 7-1, 7-3 (illus)
  - ammunition, 7-30
    - authorized cartridges, 7-30
      - M57 HE, 7-30 (illus)
      - M68 smoke, 7-31, 7-32 (illus)
      - M91 illumination, 7-32 (illus)
      - M929 smoke, 7-33, 7-34 (illus)
      - M933 HE, 7-33 (illus)
      - M934 HE, 7-33 (illus)
    - care and handling, 7-36
    - classification, 7-30
    - fuzes, 7-36
      - M734, 7-37 (illus)
      - M745 PD, 7-37 (illus)
      - M776 MTSQ, 7-36 (illus)
      - M935 PD, 7-36, 7-37 (illus)
    - preparation, 7-34
  - components, 7-2
    - barrel assembly, M298, 7-4, 7-5 (illus)
    - baseplate, M9, 7-7, 7-8 (illus)
    - bipod assembly, M190, 7-5, 7-6 (illus)
    - bipod assembly, M191, 7-6, 7-7 (illus)
  - duties, 7-1, 7-2 (illus)
  - operations, carrier-mounted, 7-20
    - carrier, M1064A3, 7-17
      - description, 7-17, 7-18 (illus)
    - deflection and elevation changes, large, 7-22
    - deflection and elevation changes, small, 7-22
    - maintenance, 7-21
    - misfire procedures, 7-23
    - mounting, 7-20
    - safety checks, 7-28
  - operations, ground-mounted, 7-8
    - deflection and elevation changes, large, 7-11
    - deflection and elevation changes, small, 7-10
    - loading and firing, 7-15
    - misfire procedures, 7-12
    - safety checks, 7-10
  - organization, 7-1
- mortar fire, 1-1
  - firing, 2-49
    - arm-and-hand signals, 2-52, 2-53 (illus)
    - night firing, 2-54

- target engagement, 2-50
- positions, 1-2
- without FDC, 8-1
  - deep targets, 8-8 (illus)
  - direct-lay, 8-9
  - fire control, 8-5
  - initial fire commands, 8-3
  - observer corrections, 8-1 through 8-3 (illus)
  - procedures, 8-1
  - range adjustment, 8-11
    - bracketing, 8-12, 8-13 (illus)
    - creeping, 8-13
  - wide targets, 8-6, 8-7 (illus)
- parallel sheaf, 2-38 (illus)
- reciprocal laying, 2-39 (illus)
  - on a grid azimuth, 2-40, 2-41 (illus)
  - on a magnetic azimuth, 2-43
  - using M2 compass, 2-45
  - using mortar sights, 2-43
  - using orienting angle, 2-43
- sabot, M1, A-9, A-10 (illus), A-11 (illus)
  - advantages, A-12
  - ammunition, A-13, A-14 (illus), A-15 (illus), A-16 (illus)
  - disadvantages, A-13
  - equipment, A-13
  - malfunctions, A-17
  - misfire, A-18
  - safety, A-17
  - training, A-19
- safety, 1-3
  - card, 1-5
  - checklist, 1-4
  - diagram, 1-6
    - example, 1-7, 1-8
  - personnel, 1-3
    - duties, 1-3
  - procedures, 1-3
- short-range training round (SRTR), M766, 3-22 (illus), A-24
  - advantages, A-26
  - ammunition, A-26
  - components, A-25 (illus)

- description, A-24
- misfire, A-37
- range recommendations, A-25, A-26 (illus)
- safety, A-36
- training, A-32
- sightunits, 2-19
  - M53-series, 2-19 (illus)
    - care and maintenance, 2-22
    - elbow telescope, M109, 2-19, 2-20 (illus)
    - operation, 2-21
    - telescope mount, M128, 2-20
  - M64-series, 2-23, 2-24 (illus)
    - components, 2-23
    - illumination, 2-24
    - safety precautions, 2-25 (illus)
  - M67, 2-26 (illus)
    - components, 2-26
    - safety precautions, 2-27
- subcaliber device, 60-mm (see 60-mm subcaliber device)
- subcaliber insert, M303 (see M303 subcaliber insert)
- training, B-1
  - annual training programs, B-8, B-9 (illus)
  - collective training, B-6
  - cross training, B-6
  - evaluation, B-11
  - integrated training strategy, B-4, B-5 (illus)
  - philosophy, B-1
  - plan development, B-3
  - unit mortar training, B-1